Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A 2x2 optical switch comprising:

a first port adapted to receive an optical input and generate an optical output;

a second port adapted to receive an optical input and generate an optical output;

a switching component group including a singular polarization switch;

a first component group coupled between the first port and the switching component group;

a second component group coupled between the second port and the switching component group;

wherein,

when the singular polarization switch is disabled, the switching component group being adapted

to pass each light beam exiting from the first component group, each exiting light beam having a first chosen polarization, and reintroduce to the first component group the light beams without changing the polarization of the light beams, and

to pass each light beam exiting from the second component group, each exiting light beam having a second chosen polarization, and reintroduce to the second component group the light beams without changing the polarization of the light beams, and

when the singular polarization switch is enabled, the switching component group being adapted

to convert light beams exiting from the first component group with the first chosen polarization into light beams entering the second component group with the second chosen polarization, and

to convert light beams exiting from the second component group with the second chosen polarization into light beams entering the first component group with the first chosen polarization.

2. (Previously presented) The 2x2 optical switch of claim 1, wherein

the first component group is adapted to receive the optical input from the first port and generate two light beams with the first chosen polarization entering the switching component group, and to receive two light beams with the first chosen polarization from the switching component group and generate an optical output to the first port; and

the second component group is adapted to receive the optical input from the second port and generate two light beams with the second chosen polarization entering the switching component group, and to receive two light beams with the second chosen polarization from the switching component group and generate an optical output to the second port.

3. (Previously Presented) The 2x2 optical switch of claim 1, wherein the singular polarization switch includes a mirror.

4. (Previously Presented) The 2x2 optical switch of claim 1, wherein the singular polarization switch includes a liquid crystal cell sandwiched between two transparent conducting plates.

5. (Previously Presented) The 2x2 optical switch of claim 1, wherein the singular polarization switch includes a Faraday rotator modulated by a magnetic field.

6. (Previously Presented) The 2x2 optical switch of claim 1, wherein the first component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a half wavelength plate coupled to the second birefringent material; and

a Faraday rotator coupled to the half wavelength plate.

7. (Previously Presented) The 2x2 optical switch of claim 1, wherein the first component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a Faraday rotator coupled to the second birefringent material; and

a half wavelength plate coupled to the Faraday rotator.

8. (Previously presented) The 2x2 optical switch of claim 1, wherein the switching component group comprises:

a reflector;

a singular polarization switch; and

a polarization beam splitter coupled between the reflector and the singular polarization switch.

9. (Previously Presented) An optical switch comprising:

a first port adapted to receive an optical input and generate an optical output;

a second port adapted to receive an optical input and generate an optical output;

a switching component group including:

a reflector;

a polarization beam splitter coupled to the reflector; and

a singular polarization switch coupled to the polarization beam splitter;

a first component group coupled between the first port and the reflector in the switching component group, the first component group operable to provide light beams, each light beam having a first polarization, to the switching component group; and

a second component group coupled between the second port and the polarization beam splitter in the switching component group, the second component group operable to provide light beams, each light beam having a second polarization, to the switching component group.

10. (Previously presented) The optical switch of claim 9, wherein

the first component group is adapted to receive the optical input from the first port and generate one or more light beams with a first chosen polarization entering the reflector in the switching component group, and to receive one or more light beams with the first chosen polarization from the reflector in the switching component group and generate an optical output to the first port; and

the second component group is adapted to receive the optical input from the second port and generate one or more light beams with a second chosen polarization entering the polarization beam splitter in the switching component group, and to receive one or more light beams with the second chosen polarization from the polarization beam splitter in the switching component group and generate an optical output to the second port.

11. (Previously Presented) The optical switch of claim 9, wherein the singular polarization switch includes a mirror.

12. (Previously Presented) The optical switch of claim 9, wherein the singular polarization switch includes a liquid crystal cell sandwiched between two transparent conducting plates.

13. (Previously Presented) The optical switch of claim 9, wherein the singular polarization switch includes a Faraday rotator modulated by a magnetic field.

14. (Previously Presented) The optical switch of claim 9, wherein the singular polarization switch includes an optical filter.

15. (Original) The optical switch of claim 14, wherein the optical filter is a tunable optical filter.

16. (Previously Presented) The optical switch of claim 9, wherein the first component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a half wavelength plate coupled to the second birefringent material; and

a Faraday rotator coupled to the half wavelength plate.

17. (Previously Presented) The optical switch of claim 9, wherein the first component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a Faraday rotator coupled to the second birefringent material; and

a half wavelength plate coupled to the Faraday rotator.

18. (Previously Presented) The optical switch of claim 9, wherein the second component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a half wavelength plate coupled to the second birefringent material; and

a Faraday rotator coupled to the half wavelength plate.

19. (Previously Presented) The optical switch of claim 9, wherein the second component group comprises:

a first birefringent material;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate;

a Faraday rotator coupled to the second birefringent material; and

a half wavelength plate coupled to the Faraday rotator.

20. (Previously Presented) An optical switch comprising:

a first port adapted to receive an optical input and generate an optical output;

a second port adapted to receive an optical input and generate an optical output;

a switching component group including:

a reflector;

a polarization beam splitter coupled to the reflector; and

a singular polarization switch coupled to the polarization beam splitter;

a first component group including:

a first birefringent material coupled to the first port;

a structured half wavelength plate coupled to the first birefringent material, the structured half wavelength plate being operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged;

a second birefringent material coupled to the structured half wavelength plate; and

a polarization component subgroup including a coupled half wavelength plate and a Faraday rotator, the polarization component group coupled between the second birefringent material and the reflector in the switching component group; and

a second component group including:

a first birefringent material coupled to the second port;

a structured half wavelength plate coupled to the first birefringent material;

a second birefringent material coupled to the structured half wavelength plate; and

a polarization component subgroup including a coupled half wavelength plate and a Faraday rotator, the polarization component group coupled between the second birefringent material and the polarization beam splitter in the switching component group.

21. (Previously Presented) An optical switch comprising:

a first port adapted to receive an optical input and generate an optical output;

a second port adapted to receive an optical input and generate an optical output;

a switching component group including:

a reflector;

a polarization beam splitter coupled to the reflector; and

a singular polarization switch coupled to the polarization beam splitter;

a first component group coupled between the first port and the reflector in the switching component group and including a non-symmetrical device, the first component group adapted to provide an optical output having a first polarization to the switching component group; and

a second component group coupled between the second port and the polarization beam splitter in the switching component group and including a non-symmetrical device, the second component group adapted to provide a optical output having a second polarization to the switching component group, wherein each of the non-symmetrical devices allows for a traversal of light beams along different paths in a respective component group when the light beams pass round trip through the respective component groups.

22. (Currently Amended) An optical component group comprising:

a first birefringent material;

a structured half wavelength plate coupled between the first birefringent material and a second birefringent material, the structured half wavelength plate being operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged; and

a ~~half~~ wavelength plate coupled between the second birefringent material and a Faraday rotator, where the second birefringent material is coupled between the structured half wavelength plate and the wavelength plate.

23. (Original) The optical component of claim 22 wherein the structured half wavelength plate coupled to the first birefringent material plate through a wedge.

24. (Original) The optical component of claim 22 wherein the structured half wavelength plate includes two regions of half wavelength plates placed diagonal to each other and two regions of transparent plates placed diagonal to each other.

25. (Currently Amended) An optical component group comprising:

a first birefringent material;

a structured half wavelength plate coupled between the first birefringent material and a second birefringent material, the structured half wavelength plate being operable to rotate a polarization of light passing through a first portion of the structured half wavelength plate while the polarization of light passing through a second portion of the structured half wavelength plate remains substantially unchanged; and

a Faraday rotator coupled between the second birefringent material and a ~~half~~ wavelength plate, where the second birefringent material is coupled between the structured half wavelength plate and the Faraday rotator.

26. (Original) The optical component of claim 25 wherein the structured half wavelength plate coupled to the first birefringent material through a wedge.

27. (Original) The optical component of claim 25 wherein the structured half wavelength plate includes two regions of half wavelength plates placed diagonal to each other and two regions of transparent plates placed diagonal to each other.